



**Environmental Protection Department**  
**Hazardous Waste Management Division**

**Transition Plan:**  
**Transfer of Existing Waste Treatment Units**  
**to the**  
**Decontamination and Waste Treatment Facility**

**February 1997**

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Work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract W-7405-Eng-48.

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## **Transition Plan: Transfer of Existing Waste Treatment Units to the Decontamination and Waste Treatment Facility (DWTF)**

### **1. Transition Summary**

The transition plan for DWTF facilities involves Buildings 693 and 695, which will replace several existing waste management units located within the current Hazardous Waste Management (HWM) Area 514 facility. The transition from the old treatment/storage units to the DWTF will comprise the following actions:

- The following operations will be transferred to Building 695:
  - Building 513 Solidification Unit
  - Building 513 Shredding Unit
  - Area 514-1 Cold Vapor Evaporation Unit
  - Area 514-1 Portable Blending Unit (Waste Blending Unit)
  - Area 514-1 Tank Blending Unit
  - Area 514-1 Centrifugation Unit
  - Area 514-1 Carbon Adsorption Unit (Gas Adsorption Unit)
- When the DWTF is fully operational, the following operations will be closed:
  - Area 514 Storage and Treatment Quadruple Tank Unit
  - Area 514 Waste Water Filtration Unit
  - Area 514 Waste Water Treatment Tank Farm Unit
  - Area 514 Bulking/Blending Unit
- The following container storage units (CSUs) ultimately will be closed, and waste will be stored in Building 693 or Building 695 of the DWTF:
  - Building 513 CSU
  - Area 514-1 CSU
  - Area 514-2 CSU
  - Area 514-3 CSU

## 2. Transition Schedule

To avoid shutting down waste-management operations, the transition will be carried out in phases. The scheduled time periods for each phase are shown in Table 1. The activities of each phase are described below.

- **Phase A**
  - Relocation of
    - Building 513 Shredding Unit
    - Building 513 Solidification Unit
- **Phase B**
  - Relocation of
    - Area 514-1 Centrifugation Unit
    - Area 514-1 Portable Blending Unit
    - Area 514-1 Tank Blending Unit
- **Phase C**
  - Relocation of drums from Building 513 to Building 693 or Building 695
  - RCRA closure of Building 513
- **Phase D**
  - Relocation of
    - Area 514-1 Cold Vapor Evaporation Unit
    - Area 514-1 Carbon Adsorption Unit
- **Phase E**
  - Relocation of waste liquids from
    - Area 514 Storage and Treatment Quadruple Tank Unit
    - Area 514 Waste Water Filtration Unit
    - Area 514 Waste Water Treatment Tank Farm Unit

RCRA closure of

- Area 514 Storage and Treatment Quadruple Tank Unit
- Area 514 Waste Water Filtration Unit
- Area 514 Waste Water Treatment Tank Farm Unit

- **Phase F**

Relocation to Building 693 or Building 695 of waste drums in

- Area 514-1 Container Storage Unit
- Area 514-2 Container Storage Unit
- Area 514-3 Container Storage Unit

RCRA closure of

- Area 514-1 Container Storage Unit
- Area 514-2 Container Storage Unit
- Area 514-3 Container Storage Unit

### **3. Transition Milestones**

The transition process is triggered by various DWTF project milestones. These milestones, which are described below, indicate the general stage of the transition process. This overall process may occur sequentially for each DWTF building.

1. Beneficial occupancy

The point at which the contractor completes its part of the construction project and LLNL's Plant Engineering Department may begin its share of the construction and installation work

2. Activation

The point at which transfer of the equipment from old HWM facilities to the DWTF may begin and new treatment units installed

3. Operational readiness review/ regulatory review

- The point at which HWM demonstrates to DOE that all procedures are in place, all relevant personnel training has occurred, and that all equipment has been tested.
- The point at which HWM demonstrates to the Department of Toxic Substances Control (DTSC) that all required paperwork is

in place (e.g. procedures), and that as-builts match the design that was submitted in the Part B.

4. Trial treatment

The point at which newly installed equipment will undergo a trial operational period, including refinements to the equipment, as necessary, and retesting.

5. Final operational acceptance

The point at which equipment is proved effective and ready for day-to-day operational use

6 Shut-down and closure

The point at which old treatment units (those replaced by new treatment units) are to be shut down and closed under RCRA closure requirements (storage areas and pads beneath treatment units that have been moved to DWTF will also be closed under RCRA requirements)

Activation (#2 above) triggers the movement of waste treatment units from the Area 514 facility to the DWTF. This can only occur after beneficial occupancy is achieved and Plant Engineering work has been completed. Once the units have been moved, they must be tested (#4 above). Replacement treatment units also must be tested. Simultaneous treatment will occur in the Area 514 facility and the DWTF during this time. Treatment capacities will be carefully monitored to avoid exceeding the volumes allowed by the permit (see Section 4 of this Transition Plan). The duration of the trial treatment phase cannot be determined exactly; therefore, the transition schedule will be adjusted as needed during the testing period.

When the new or transferred equipment is judged fully acceptable (#5 above), day-to-day operations will begin at the DWTF. At this point, the Area 514 counterpart equipment can be shut down, and the obsolete treatment units can undergo RCRA closure (#6 above).

The pads underneath the Area 514 units moved to the DWTF will also be closed per RCRA. Waste drums will be moved from their Area 514 storage location to DWTF, and the Area 514 storage areas will be closed under RCRA. Closures will be scheduled so they do not interfere with waste treatments that may still be taking place.

The order of transition was chosen to be consistent with the general milestones discussed previously. Additionally, some units are scheduled to be moved or closed sooner than others because of operational considerations. Rationale for these phasing decisions is as follows:

- **Phase A**—relocate shredding unit and solidification unit to the DWTF. The removal of these units from Building 513 will have minimal impact on the overall operation. The goal is to empty Building 513 as soon as possible because the DWTF will be better suited for these activities. These unit transfer activities won't interfere with operations still taking place in the Area 514 facility.
- **Phase B**—relocate centrifugation unit, portable blending unit, and tank blending unit to DWTF. These will be the first units idle after treating Area 514's liquid waste. Therefore, these units can then be moved to the DWTF without causing adverse conditions.
- **Phase C**—relocate stored waste drums from Building 513 to the DWTF and begin RCRA closure of Building 513. As previously stated, the goal is to empty and then close Building 513 as soon as possible. This relocation will not interfere with operations still taking place in the Areas 514 facility.
- **Phase D**—relocate the evaporation and carbon adsorption units. These units will be the next treatment units to become idle after treating Area 514's liquid waste. Because these units work in tandem, they must be moved together.
- **Phase E**—transfer any liquid waste remaining at Area 514 to DWTF and close the quadruple-tank, silver-recovery, waste water-filtration, and tank farm units. It is anticipated that the DWTF replacement units will be fully operational at this point (step #5, Final Operational Acceptance).
- **Phase F**—relocate stored waste drums to DWTF and close the Area 514-1, Area 514-2, and Area 514-3 container storage units. Because the waste will be treated in the DWTF, the waste inventory will be moved there. The container storage units in the Area 514 facility can then undergo RCRA closure.

#### 4. Aggregate Storage and Treatment Capacities

- **Storage**

The total aggregate storage capacity for all HWM facilities will not exceed the storage capacity designated in the permit. Further, Area 514 facility container storage units will not exceed interim storage capacities.

- **Treatment**

While Area 514 facilities are being moved to the DWTF, operations at any older units will remain within interim-status daily design capacities, per the 1991 Part A. However, if a comparable unit is operating at the DWTF at the same time, total treatment capacities

for both facilities will not exceed the annual treatment capacity found in the permit.

Operating and safety procedures will be developed and in place before the transition phase begins, thus ensuring the total annual throughput stays within permit requirements. Further, facilities operating under interim status also will operate within the interim-status requirements.

### **5. Environmental, Safety, and Health (ES&H) Procedures**

HWM receives support from ES&H Team 4, which comprises professional industrial hygienists, a health physicist, an environmental analyst, an industrial safety expert, a fire engineer, and other professionals. This team will review and provide input to HWM procedures to address the transition process. The team will also be on hand to supervise the actual transition process.

Treatment units to be moved will be contained (i.e., in boxes, double-wrapped, or contained by other means) to avoid releasing potential contamination into the atmosphere. The Team 4 professionals will ensure that workers, public, and environment are protected from chemical or radiological exposure.

